

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
14 December 2000 (14.12.2000)

PCT

(10) International Publication Number  
**WO 00/75524 A1**

(51) International Patent Classification<sup>7</sup>: **F16C 29/02**

(21) International Application Number: **PCT/US00/14185**

(22) International Filing Date: **23 May 2000 (23.05.2000)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
**60/137,550** **4 June 1999 (04.06.1999)** **US**

(71) Applicant (for all designated States except US): **GRACO INC.** [US/US]; 4050 Olson Memorial Highway, Golden Valley, MN 55422 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WEINBERGER,**

Mark [US/US]; 8011 Eastwood Road, Mounds View, MN 55112 (US). **KORZENOWSKI, James** [US/US]; 715 Main Street N.E., Minneapolis, MN 55413 (US). **HILDE, Mark** [US/US]; 14240 34th Street, Stillwater, MN 55082 (US).

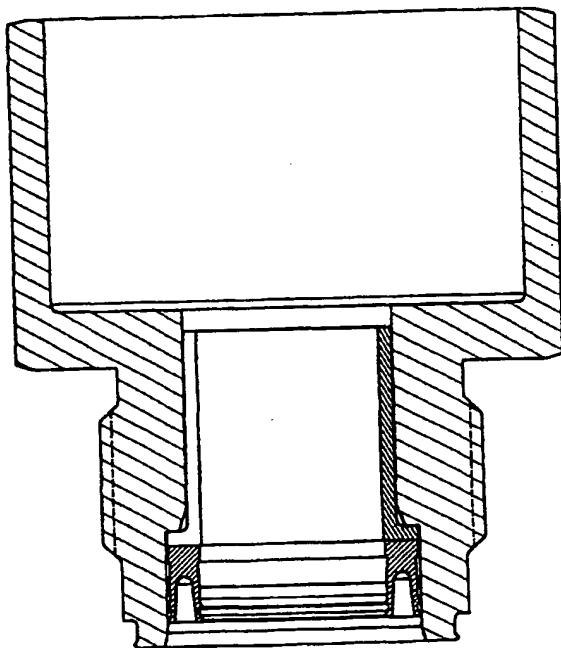
(74) Agent: **FARROW, Douglas**; Graco Inc., 4050 Olson Memorial Highway, Golden Valley, MN 55422 (US).

(81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: **WET CUP THROAT SEAL AND BEARING ASSEMBLY**



(57) Abstract: Wet cup throat seal (3) and bearing (2) combination is designed for use in a reciprocating piston pump where in the wet cup (1) is designed to hold the seal assembly thereby insuring proper displacement rod (5) alignment and maximizing seal life. The construction also allows for easy and inexpensive replacement and allows piston seals (6) and throat seals (3) to be interchangeable.

WO 00/75524 A1